CLAIM AMENDMENTS

1. (presently amended) An optical module comprising:

~~a~~ surface light receiving type or ~~a~~ surface light emitting type optical ~~element~~ elements mounted on one surface of a substrate with a predetermined ~~substrate~~ pitch;

at least one spacer mounted on the one surface of said substrate; and

an optical fiber array formed in a block shape with a first surface and a second surface that is opposite to and parallel with the first surface, and having a plurality of optical fibers buried therein substantially in parallel with one another with ~~a~~ the predetermined pitch therebetween, wherein opposite ends of the optical fibers are exposed to the first and second surfaces of the optical fiber array,

said optical fiber array ~~being~~ mounted at the second surface thereof to said substrate with said spacer interposed between the substrate and the optical fiber array such that centers of the optical fibers exposed at the first surface are aligned with centers of respective ~~are opposed to a plurality of light receiving elements or light emitting~~ optical elements ~~of the optical element~~ mounted on the substrate ~~respectively, and said optical fiber array being mounted to said substrate with alignment between the end surfaces of the optical fibers and the light receiving elements or light emitting elements carried out by image recognition thereof~~.

2. (cancelled)

3. (presently amended) The optical module as set forth in ~~claim 2~~ claim 1, wherein the optical fiber array is provided with engagement means for coupling the optical fiber array with an optical connector to each other.

4. (original) The optical module as set forth in claim 3, wherein the engagement means provided on the optical fiber array is a recess or through hole into which a pin-like projection provided on the optical connector fits.

5. (presently amended) A method of assembling an optical module comprising the steps of:

mounting a plurality of surface light receiving type or ~~a~~ surface light emitting type optical ~~element~~ elements on one surface of a substrate with a predetermined ~~substrate~~ pitch;

carrying out a passive alignment between ~~a plurality of light receiving elements or light emitting~~ the plurality of optical elements ~~of said optical element and the end surfaces~~ and first ends of a plurality of optical fibers exposed at a first surface of an optical fiber array by image recognition thereof, the optical fiber array having the plurality of optical fibers buried therein substantially in parallel with one another so that ~~the end surfaces~~ second ends of the plurality of optical fibers are exposed at a second surface of the optical fiber array that is opposite to the first surface and being opposed to the ~~light receiving elements or light~~ plurality of optical emitting elements; and

mounting the optical fiber array at the second surface thereof to the substrate with at least one spacer interposed between the substrate and the optical fiber array ~~in the state that the~~ while alignment between the ~~light receiving elements or light emitting~~ optical elements and ~~the end surfaces of~~ the optical fibers is ~~being~~ kept.

6. (presently amended) The method as set forth in claim 5, wherein the passive alignment by the image recognition is carried out on the basis of image information on the surface of the substrate on which the optical ~~element~~ elements and the spacer have been mounted as well as image information on the first surface of the optical fiber ~~array at the side thereof not opposed to the optical element~~.

7. (presently amended) The method as set forth in claim 5, wherein the optical array is fixed at the second surface thereof to the spacer mounted on the substrate ~~in the state that~~ while the alignment between the ~~light receiving elements or light emitting~~ optical elements and the end ~~surfaces~~ first ends of the optical fibers is being kept.

8. (presently amended) An optical module comprising:

a plurality of surface light receiving type or surface light emitting type optical elements mounted ~~substantially in parallel with one another~~ with a predetermined pitch therebetween on one surface of a substrate;

at least one spacer mounted on the one surface of said substrate; and

an optical fiber array having a first surface and a second surface that is opposite to and parallel with the first surface and a plurality of optical fibers buried therein substantially in parallel with one another with the same predetermined pitch therebetween as that of the

optical elements mounted on the substrate, wherein opposite ends of the optical fibers are exposed to the first and second surfaces of the optical fiber array,

said optical fiber array ~~being~~ mounted at its second surface to the one surface of said substrate with said spacer interposed between the substrate and the optical fiber array such that ~~first~~ ends of the optical fibers exposed at ~~a~~ the first surface of the optical fiber array ~~which faces the substrate are opposed to the optical elements mounted on the substrate respectively, and the respective optical fibers of said optical fiber array~~ are aligned ~~in lines~~ with ~~the~~ respective optical elements mounted on said substrate ~~by carrying out image recognition of an image of second ends of the optical fibers exposed at a second surface of the optical fiber array which is opposite to the first surface thereof and an image of the optical elements mounted on the substrate~~.

9. (presently amended) The optical module as set forth in claim 8, wherein ~~the alignment by the image recognition is carried out on the basis of image information on~~ the one surface of the substrate on which the optical element and the spacer ~~have been~~ are mounted ~~as well as image information on~~ and the first surface of the optical fiber array ~~at the side thereof not opposed to the optical element~~ are adapted with image information for passive alignment by image recognition.

10. (presently amended) The optical module as set forth in ~~claim 9~~ claim 8, wherein the optical fiber array is provided with engagement means for coupling the optical fiber array with an optical connector ~~to each other~~.

11. (presently amended) The optical module as set forth in claim 10, wherein the engagement means provided on the optical fiber array is a plurality of recesses or through holes into which projection pins provided on the optical connector fit.

12. (presently amended) A method of assembling an optical module comprising the steps of:

mounting a plurality of surface light receiving type or surface light emitting type optical elements ~~substantially in parallel with one another~~ with a predetermined pitch therebetween on one surface of a substrate;

passively aligning ~~in lines~~ centers of the optical elements with centers of respective first ends of a plurality of optical fibers exposed at a first surface of an optical fiber array,

wherein the optical fibers are buried in ~~an~~ the optical fiber array substantially in parallel with one another with the same predetermined pitch therebetween as that of the optical elements mounted on the substrate such that second ends of the optical fibers are exposed at a second surface of the optical fiber array that is opposite to the first surface, said passive alignment carried out by image recognition of an image of the optical elements mounted on the one surface of the substrate ~~which faces a first surface of the optical fiber array~~ and an image of ~~second~~ the first ends of the optical fibers ~~which are exposed at a second surface opposite to the first surface of the optical fiber array,~~ so that ~~first~~ the second ends of the optical fibers ~~which are exposed at the first surface of the optical fiber array~~ are respectively opposed to the optical elements; and

mounting the optical fiber array to the substrate with at least one spacer interposed between the substrate and the optical fiber array ~~in a manner~~ such that a predetermined gap is provided between the respective optical elements and the ~~opposing first~~ second ends of the respective optical fibers while the alignment between the optical elements and the optical fibers is being kept.

13. (presently amended) The method as set forth in claim 12, wherein the passive aligning by image recognition is carried out on the basis of image information on the one surface of the substrate on which the optical element and the spacer ~~have been~~ are mounted as well as image information on the first surface of the optical fiber array ~~at the side thereof not opposed to the optical element~~.

14. (new) The method as set forth in claim 12 further comprising the step of providing engagement means for coupling the optical fiber array with an optical connector to said optical fiber array.

15. (new) The method as set forth in claim 5 further comprising the step of providing engagement means for coupling the optical fiber array with an optical connector to said optical fiber array.